

Work Order ID 144088

April 01, 2016 1:03:24 PM

144088

Page 1

Item ID: D412-702-073 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Comfort Crew Shoulder Harness
 Start Date: 4/4/2016 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 4/8/2016 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: SK Date: 20160401 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9642	A								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP D412-702-073 CHG001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.00							
Quality Control									

DAS
27
9-89

2X

DAS
27
9-89

MCS 160407

2

DAS
27
9-89

DAS
28
9-89

APR 07 2016

2X

DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130									
Packaging	Memo FG	0.00							
Packaging	Identify and pack for shipping as per PPP D412-702-073								
	Location: 028								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

DAS
28
989

APR 08 2016

MUS

APR 11 2016

MUS

APR 11 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Page 1

Work Order ID: 144088

144088

Parent Item: D412-702-073

D412-702-073

Parent Item Name: Comfort Crew Shoulder Harness

Start Date: 4/4/2016

Required Date: 4/8/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 13.04.05 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN3-10A *AN3-10A* Bolt		Purchased	No				Each	276.0000	5	4			DAS 6 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				1					
				m132763				1					
				over003				100					
				m134249				100					
				ST349				175					
				m133992				75		4			
				m134573				100					
AN3-4A *AN3-4A* Bolt		Purchased	No				Each	396.0000	8	8			DAS 6 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				over003				300					
				m134502				300					
				ST350				96					
				m133990				96		8			
AN4-6A *AN4-6A* BOLT		Purchased	No				Each	581.0000	5	4			DAS 6 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST345				581					
				M130851				44		4			
				M133790				537					

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Work Order ID: 144088

144088

Parent Item: D412-702-073

D412-702-073

Parent Item Name: Comfort Crew Shoulder Harness

Start Date: 4/4/2016

Required Date: 4/8/2016

Start Qty: 2.00

Required Qty: 2.00

D4305-043 Manufactured No

Each 4.0000

D4305-043

Shoulder Harness Assembly

**

DAS
27
9-89

Location

Loc Qty

Loc Code

ST462

4

114129

4

MS21042L3

Purchased No

Each

2,202.000

MS21042L3

Nut

**

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

100

m133790

100

GA

808

m133790

8

m134360

800

Return2016

1

M132382

1

ST304

1293

m134039

126

m134360

1167

DAS
28
9-89

DAS
28
9-89
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Work Order ID: 144088

144088

Parent Item: D412-702-073

D412-702-073

Parent Item Name: Comfort Crew Shoulder Harness

Start Date: 4/4/2016

Required Date: 4/8/2016

Start Qty: 2.00

Required Qty: 2.00

MS21042L4

Purchased

No

Each

2,049.000

3 4

MS21042L4

Locknut

**

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

37

m133363

37

GA

381

m133769

381

OVER007

1500

m134502

1500

ST303

34

m134055

34

ST305

97

m130922

97

NAS1149D0332J

Purchased

No

Each

1,794.000

18 20

NAS1149D0332J

Washer

**

DAS
6
9-89

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CA

6

m129682

6

GA

110

m132677

110

ST260a

1600

m133988

600

m134502

1000

ST266

78

m133498

78

APR 07 2016

20

Picklist Print

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Work Order ID: 144088

Parent Item: D412-702-073

Parent Item Name: Comfort Crew Shoulder Harness

144088

D412-702-073

Start Date: 4/4/2016

Required Date: 4/8/2016

Start Qty: 2.00

Required Qty: 2.00

NAS1149D0363J

Purchased

No

Each

1,358.000

6 12

NAS1149D0363.J

Washer

**

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

GA

628

m134055

628

Return2016

2

m132317

2

ST263

728

m134370

728

Each

370.0000

4 12 8

**

DAS

6

9-89

DAS

28

9-89

Location

Loc Qty

Loc Code

GA

213

m131026

213

ST264

157

m131026

157

8

APR 07 2016

NAS1149D0432J

Purchased

No

NAS1149D0432.J

WASHER

DAS
27
9-89

DAS
27
9-89

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Work Order ID: 144088

144088

Parent Item: D412-702-073

D412-702-073

Parent Item Name: Comfort Crew Shoulder Harness

Start Date: 4/4/2016

Required Date: 4/8/2016

Start Qty: 2.00

Required Qty: 2.00

NAS1149D0463J

Purchased

No

Each

4,057.000

14 8

NAS1149D0463.J

WASHER

**

DAS
28
9-89

DAS
28
9-89
APR 07 2016

Smb

Location

Loc Qty

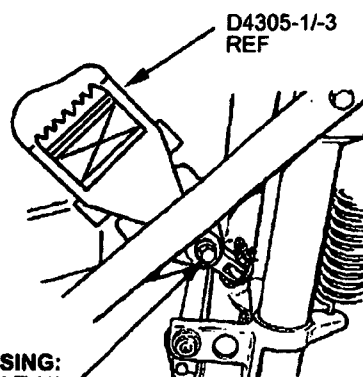
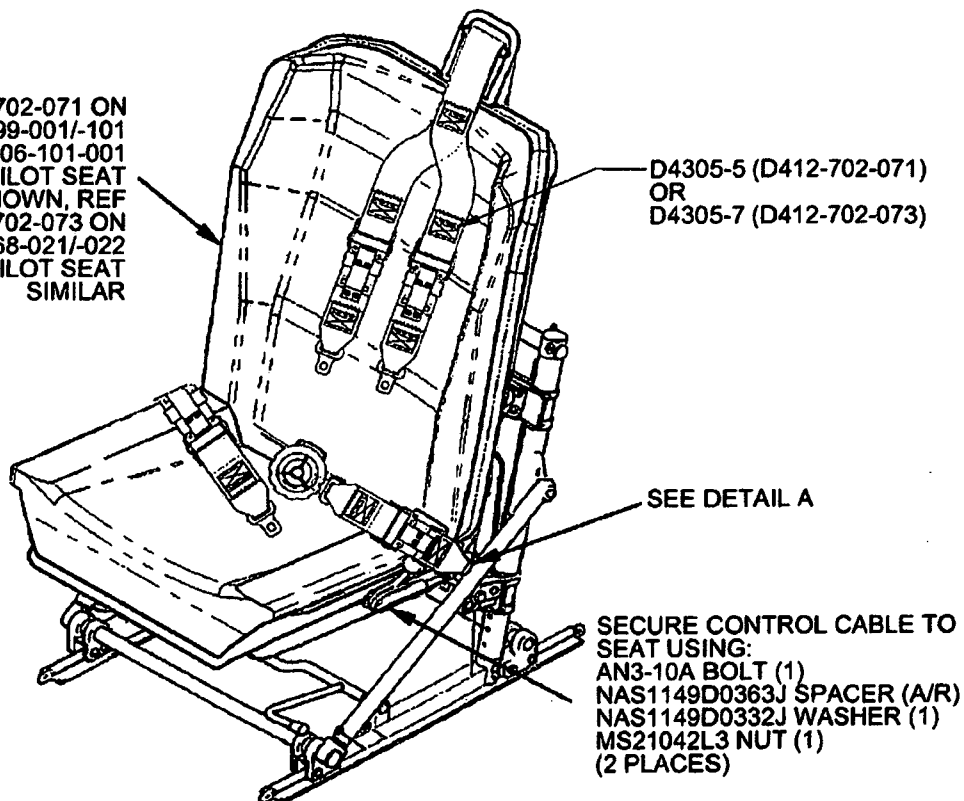
Loc Code

GA	136	
M129390	41	
M132035	95	
ST260a	2000	
M134573	2000	
ST263	933	
M134039	933	
ST269	988	
M132317	100	
M132677	888	

4.0 INSTALLATION

INSTALLATION OF D412-702-073 IS THE SAME AS D412-702-071 EXCEPT AS SHOWN BELOW:
REF FIGURE 2. OF IIN-D412-702-3
REF FIGURE 25.18 OF ICA D412-702

INSTALL D412-702-071 ON
205-070-799-001/-101
OR 212-706-101-001
PILOT/CO-PILOT SEAT
SHOWN, REF
INSTALL D412-702-073 ON
204-070-468-021/-022
PILOT/CO-PILOT SEAT
SIMILAR



INSTALL LAP BELTS USING:
AN4-6A BOLT (1)
NAS1149D0463J SPACER (2)
NAS1149D0432J WASHER (2)
MS21042L4 NUT (1)
(BOTH SIDES)

DETAIL A

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-Q-01

APPROVED

BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 13.02.01
CERT. NO.: SH04-7
ISSUE NO.: 3

DESIGN	FP	DART AEROSPACE LTD	
DRAWN	SFM	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9642	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		NEW PILOT/CO-PILOT SHOULDER HARNESS	NTS
DATE	13.01.21	COPYRIGHT © 2013 BY DART AEROSPACE LTD	
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DART SERVICE INSTRUCTION

TO AMEND IIN-D412-702-3 REV. A
AND ICA-D412-702 REV. 4 OR EARLIER
REF CANADIAN STC: SH04-7
REF FAA STC: SR01997NY
REF EASA STC: EASA.IM.R.S.00710

REFERENCE ONLY

1.0 PURPOSE

THE PURPOSE OF THIS SERVICE INSTRUCTION IS TO ADD THE D412-702-073 KIT FOR AIRCRAFT MODIFIED WITH 204 SEATS PER TCCA STC SH97-38, FAA STC SR01006NY/ SR01007NY (REF DART P/N D412-712-011).

THE D4305-043 HARNESS USED IN THE D412-702-073 KIT HAS A LONGER CABLE THAN THE D4305-041 HARNESS USED IN THE D412-702-071 KIT.

2.0 PARTS LIST

QTY -073	P/N	DESCRIPTION
X	D412-702-073	PILOT/CO-PILOT SHOULDER HARNESS KIT
1	D4305-043	SHOULDER HARNESS
4	AN3-4A	BOLT
2	AN4-6A	BOLT
2	AN3-10A	BOLT
6	MS21042L3	NUT
2	MS21042L4	NUT
10	NAS1149D0332J	WASHER
6	NAS1149D0363J	WASHER
4	NAS1149D0432J	WASHER
4	NAS1149D0463J	WASHER

3.0 WEIGHT AND BALANCE

INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		ARM	MOMENT	ARM	MOMENT
D412-702-073, PILOT/CO-PILOT SHOULDER HARNESS KIT	-2.6 lbs -1.2 kg	+/-22.0 in +/-0.56 m	-57.2 in-lb -0.67 m-kG	47.0 in 1.19 m	-122.2 in-lb -1.43 m-kG

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: *[Signature]*
D. SHEPHERD (DE # 02)

DATE: 13.02.01
CERT. NO.: SH04-7
ISSUE NO.: 3

A	NEW ISSUE	SFM	13.01.21
REV.	DESCRIPTION	BY	DATE
DESIGN	RP	DART AEROSPACE LTD	
DRAWN	SFM	HAWKESBURY, ONTARIO, CANADA	
CHECKED	N/A	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9642	SHEET 1 OF 2
APPROVED	N/A	TITLE	NEW PILOT/CO-PILOT SHOULDER HARNESS
DE APPR.	N/A	SCALE	NTS
DATE	13.01.21	COPYRIGHT © 2013 BY DART AEROSPACE LTD	
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